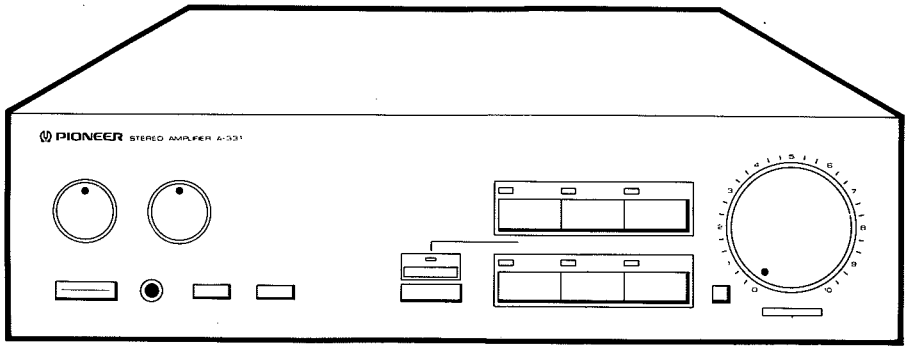
Operating Instructions

STEREO AMPLIFIER
A-331



Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE
[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian model]

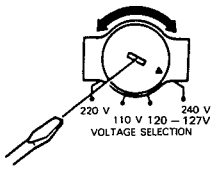
CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

LINE VOLTAGE SELECTOR SWITCH

Only multi-voltage models are provided with this switch. U.S., Canadian, European, U.K., and Australian models are not provided with this switch.
Mains voltages in Saudi Arabia are 127V and 220V only. Never use this model with 110V setting in Saudi Arabia.
The line voltage selector switch is on the rear panel. Before your model is shipped from the factory, this switch is set to the power requirements of the destination. Check that it is set properly before plugging the power cord into the AC wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switch as follows.

1. Use a medium-size screwdriver.
2. Insert the screwdriver into the groove on the voltage selector, and adjust so that the tip of the arrow points to the voltage value of your area.



Medium-size screwdriver

PIONEER®
The future of sound and vision.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS — The operating instructions should be retained for future reference.

HEED WARNING — All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

WATER AND MOISTURE — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION — The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING — The appliance should not be mounted to a wall or ceiling.

VENTILATION — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES — An outdoor antenna should be located away from power lines.

NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE — The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or the enclosure damaged.

SERVICING — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

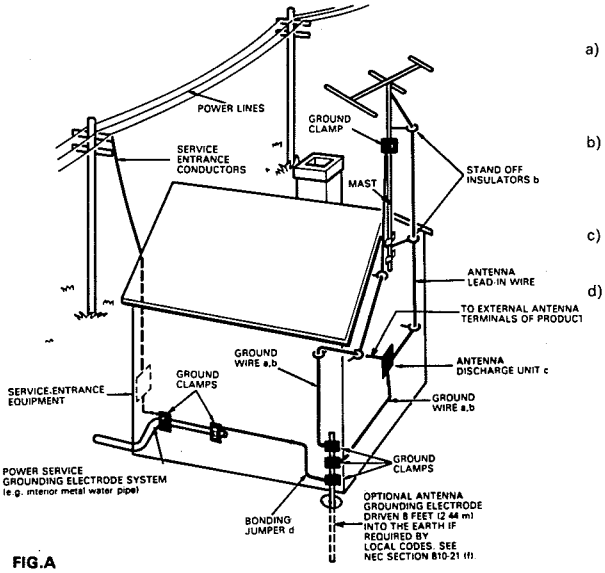

POWER LINES
GROUND CLAMP
SERVICE ENTRANCE CONDUCTORS
MAST
STAND OFF INSULATORS b
ANTENNA LEAD-IN WIRE
TO EXTERNAL ANTENNA TERMINALS OF PRODUCT
ANTENNA DISCHARGE UNIT c
GROUND WIRE a,b
GROUND CLAMPS
SERVICE ENTRANCE EQUIPMENT
GROUND WIRE a,b
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (e.g. interior metal water pipe)
BONDING JUMPER d
OPTIONAL ANTENNA GROUNDING ELECTRODE DRIVEN 8 FEET (2.44 m) INTO THE EARTH IF REQUIRED BY LOCAL CODES. SEE NEC SECTION 810-21 (f).

FIG.A

a) Use No. 10 AWG (5.3 mm^2) copper, No. 8 AWG (8.4 mm^2) aluminum, No. 17 AWG (1.0 mm^2) copperclad steel, bronze wire, or larger as ground wire.
b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.
c) Mount antenna discharge unit as closely as possible to where lead-in enters house.
d) Use jumper wire not smaller than No.6 AWG (13.3 mm^2) copper, or the equivalent, when a separate antenna-grounding electrode is used.
See NEC Section 810-21 (j).

IMPORTANT 1

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT 2

If the apparatus is fitted with AC mains power outlet(s), see REAR PANEL FACILITIES for convenient connection of additional Hi-Fi component(s). Make all connections to the AC outlet(s) and the signal terminals first. Connect the plug to the wall socket last, make sure that the power switch is off. Disconnect the wall plug when the equipment is not in (regular) use, e.g. when on vacation.

FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Equipment sold in the U.K. is not supplied with a power plug.

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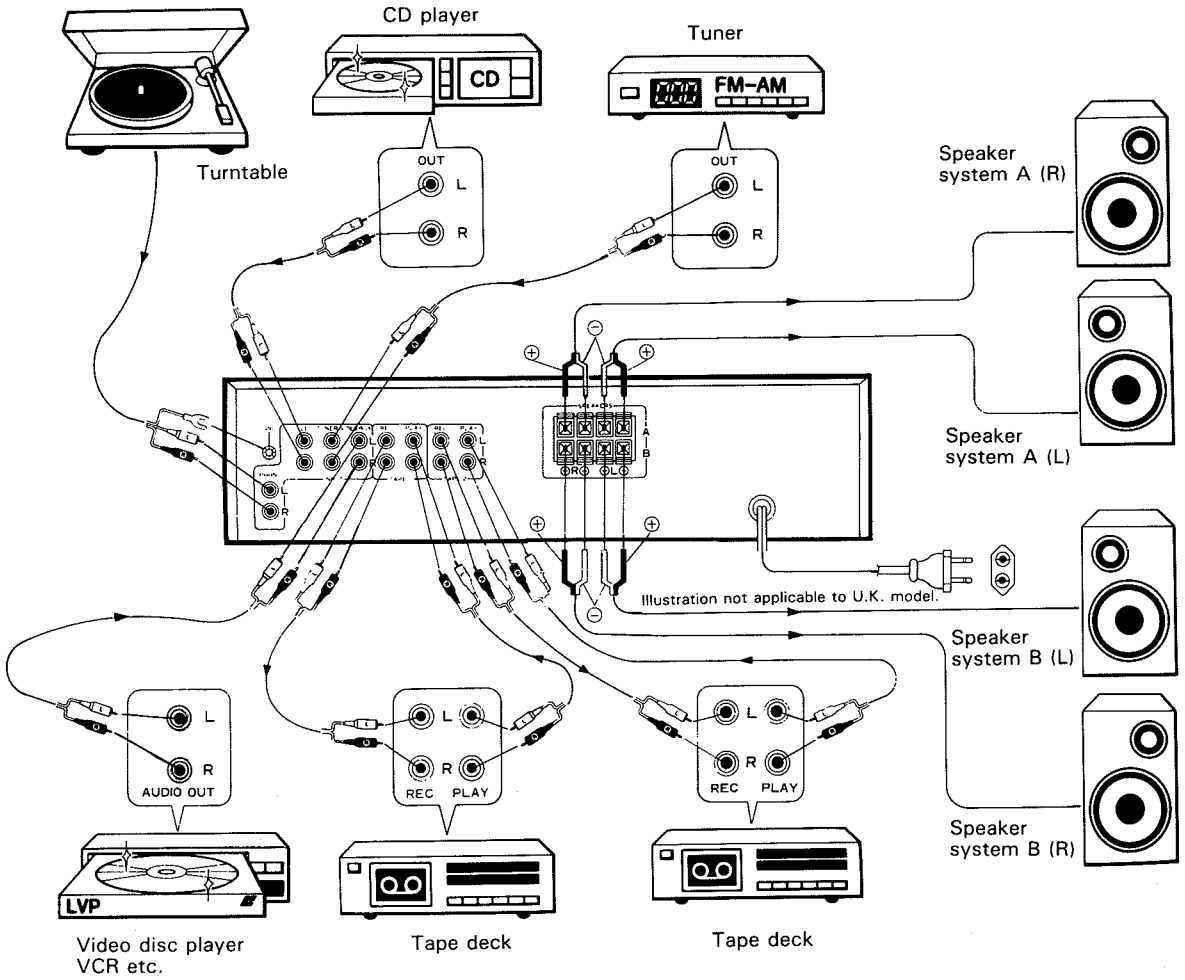
FEATURES

Drive capacity 72 W + 72 W/4 Ω (DIN) matching to high power and low impedance type speaker system.

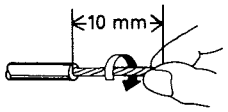
The use of CD DIRECT circuit assures high fidelity playback of consistent frequency characteristics, accompanied by maximum clarity.

CONNECTIONS

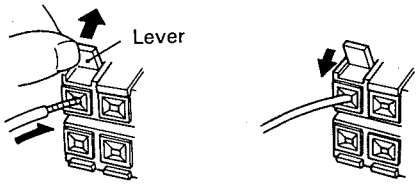


CONNECTING SPEAKER CORDS

1. Strip off the vinyl covering and twist the tip of the wire.



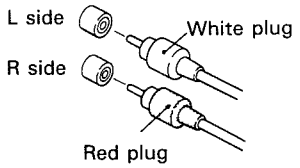
2. Raise the lever in the direction of the arrow and insert the exposed conductor into the hole.
3. Now return the lever to its original position to secure the cord.



NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

CONNECTING INPUT/OUTPUT CORDS

Connect the white plug to the L (left) side, and the red plug to the R (right) side. Be sure to push the plugs in securely.



Speaker Impedance

When speaker systems are connected to only one of the SPEAKERS A, B terminals, such speakers should have rated impedance in the range of 4 – 16 Ω
When speakers are connected to both the A and B terminals, they should have a rated impedance in the range of 8–32 Ω.

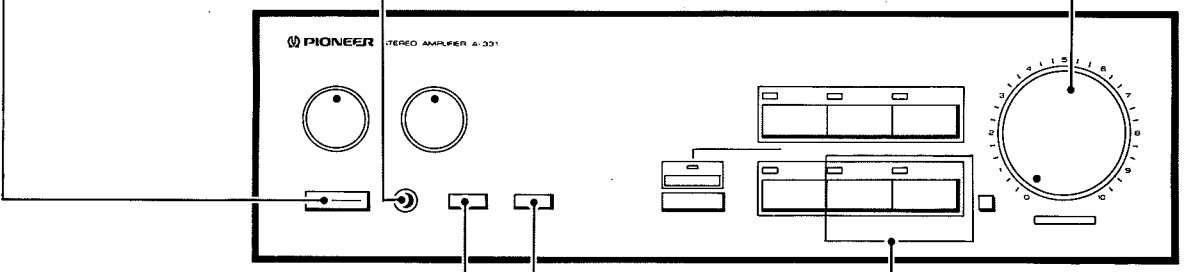
PANEL FACILITIES

FRONT PANEL

POWER switch
Press to turn power to the unit ON and OFF.

PHONES jack
When using headphones, insert their plug into this jack.

VOLUME control
Use to adjust volume level.



SPEAKERS A selector switch
Use this switch to listen to the speaker systems connected to the SPEAKERS A terminals.
[ON] — Depressed position: Sound is heard from the speaker systems.
[OFF] — Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

SPEAKERS B selector switch
Use this switch to listen to the speaker systems connected to the SPEAKERS B terminals.
[ON] — Depressed position: Sound is heard from the speaker systems.
[OFF] — Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

TAPE MONITOR switches/indicators
Use this switch to listen to tape playback, or to listen to the sounds being recorded during tape recording.
[TAPE 1] — Press when listening to the playback sound of the tape deck connected to the TAPE 1 PLAY terminals, or to monitor the sound being recorded on the tape deck connected to the TAPE 1 REC terminals.
[TAPE 2]— Press when listening to the playback sound of the tape deck connected to the TAPE 2 PLAY terminals, or to monitor the sound being recorded on the tape deck connected to the TAPE 2 REC terminals.

NOTE:
- *When both TAPE 1 and TAPE 2 are ON, the Tape of TAPE 2 can be played back or monitored.*
- *When listening to other than tape sound, keep this switch OFF (indicator OFF).*
- *This function does not operate when the CD DIRECT FUNCTION switch is in the ON position.*

TREBLE tone control

Use to adjust the high-frequency tone.
The center position is the flat (normal) position. When moved to the right, high-frequency tones are emphasized; when moved to the left, high-frequency tones are de-emphasized.

NOTE:
This function does not operate when the CD DIRECT FUNCTION switch is in the ON position.

BASS tone control

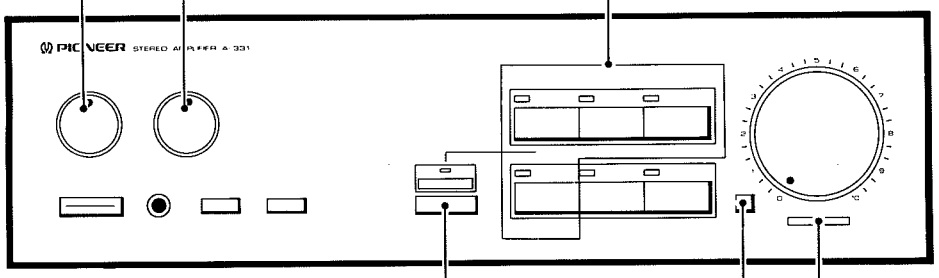
Use to adjust the low-frequency tone. The center position is the flat (normal) position. When moved to the right, low-frequency tones are emphasized; when moved to the left, low-frequency tones are de-emphasized.

NOTE:
This function does not operate when the CD DIRECT FUNCTION switch in the ON position.

INPUT selector switches/indicators

Use to select playback source.
[CD] — Press when listening to compact disc playback with a CD player.
[PHONO] — Press when listening to record playback on a turntable.
[TUNER] — Press when listening to AM or FM broadcasts with a tuner.
[VIDEO/AUX]— Press when listening to the programs from a component connected to the VIDEO/AUX terminals.

NOTE:
This function does not operate when the CD DIRECT FUNCTION switch is in the ON position.



CD DIRECT FUNCTION switch/indicator

Use this switch/indicator when you do not wish to pass the output from CD terminal equipment through the various frequency adjusting circuits (INPUT selector, TAPE MONITOR, BASS, TREBLE, BALANCE).
[ON] — When the switch is in this position, the indicator lights and the signals input from the CD terminals are reproduced without passing through the various frequency adjusting circuits.
This results in flat, pure sound which is a more faithful reproduction of the digital source.
[OFF] — When the switch is in this position, the indicator goes out, and the signal selected by INPUT selector or TAPE MONITOR switches is played back.

BALANCE control

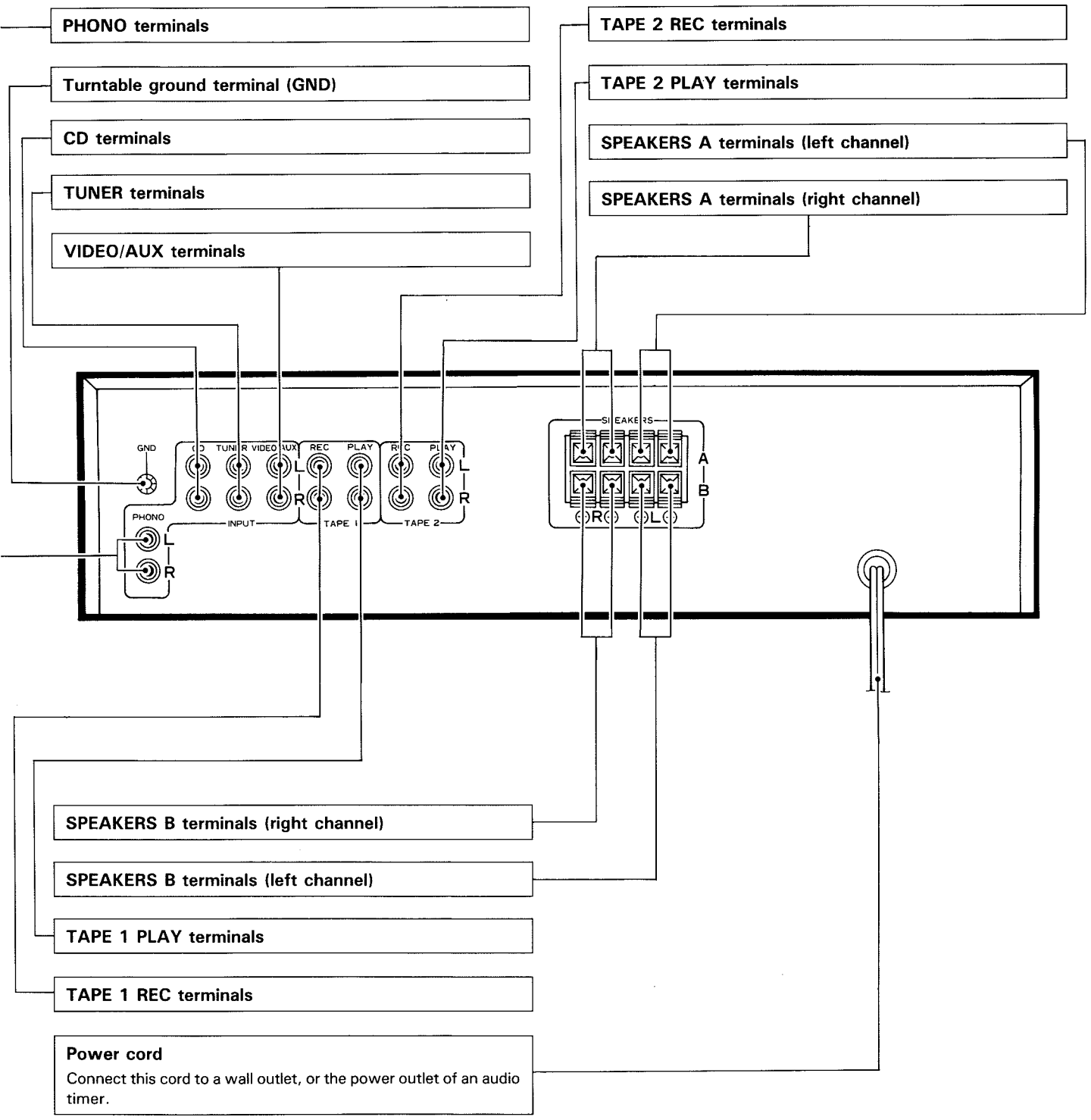
Should normally be left in the center position. Adjust balance if the sound is louder from one of the speakers. If the right side is louder, move toward the LEFT position and if the left side is louder, move toward the RIGHT position.

NOTE:
This function does not operate when the CD DIRECT FUNCTION switch is in the ON position.

LOUDNESS switch

Use when listening at low volume levels.
[OFF] — Released position: Should normally be left in this position.
[ON] — Depressed position: Boosts low and high frequencies to give added punch to playback even at low volume.

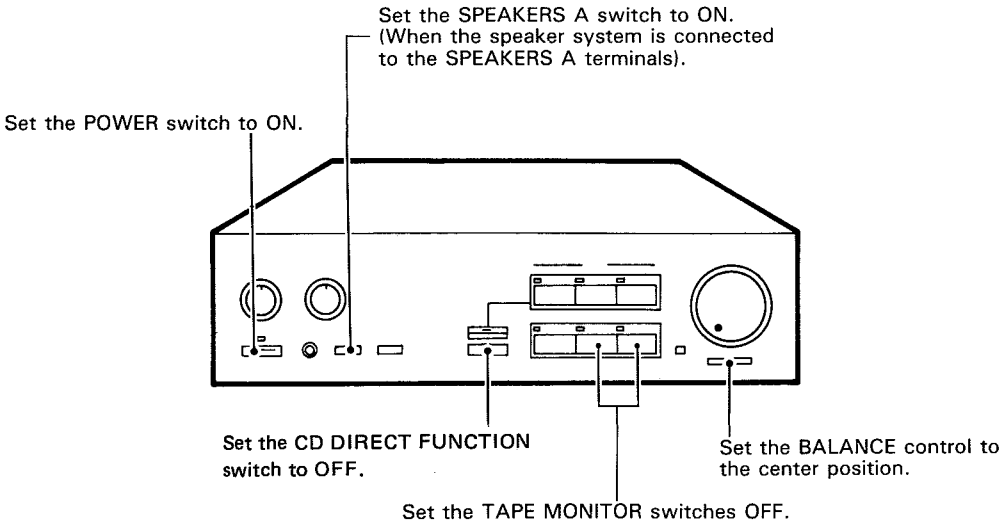
REAR PANEL


PHONO terminals
Turntable ground terminal (GND)
CD terminals
TUNER terminals
VIDEO/AUX terminals
TAPE 2 REC terminals
TAPE 2 PLAY terminals
SPEAKERS A terminals (left channel)
SPEAKERS A terminals (right channel)
GND
PHONO
INPUT
TAPE 1
TAPE 2
REC
PLAY
L
R
A
B
SPEAKERS B terminals (right channel)
SPEAKERS B terminals (left channel)
TAPE 1 PLAY terminals
TAPE 1 REC terminals
Power cord
Connect this cord to a wall outlet, or the power outlet of an audio timer.

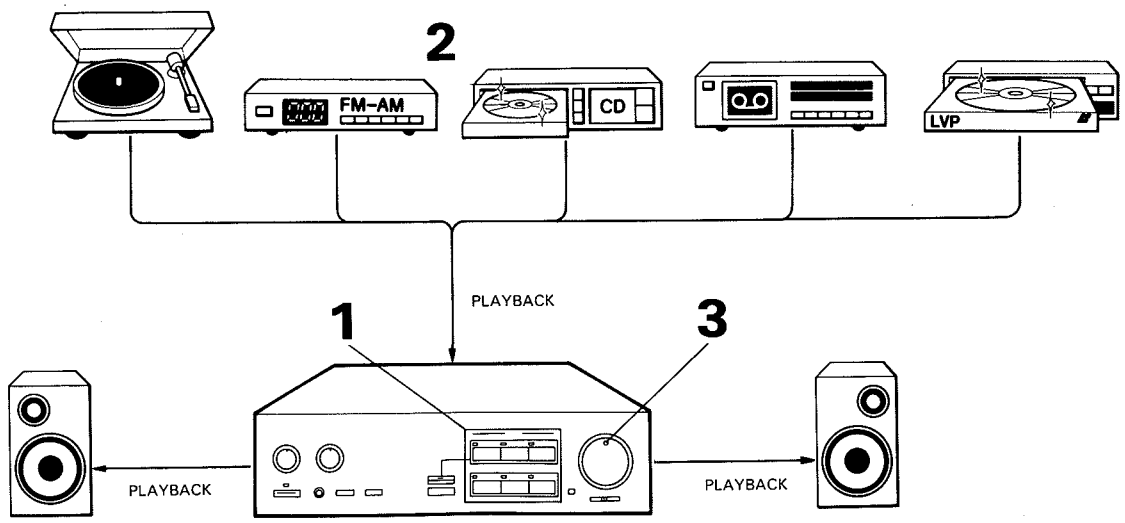
OPERATIONS

BEFORE BEGINNING OPERATIONS

Set the controls and switches as follows:


Set the SPEAKERS A switch to ON.
(When the speaker system is connected to the SPEAKERS A terminals).
Set the POWER switch to ON.
Set the CD DIRECT FUNCTION switch to OFF.
Set the BALANCE control to the center position.
Set the TAPE MONITOR switches OFF.

PLAYBACK PROCEDURES



1. Press the INPUT selector or TAPE MONITOR switch.

Use to select playback source.

- When listening to a record:
  Press [PHONO].
- When listening to an AM/FM broadcast:
  Press [TUNER].
- When listening to a compact disc:
  Press [CD] or [CD DIRECT FUNCTION].
- When listening to programs from equipment connected to the VIDEO/AUX terminals:
  Press [VIDEO/AUX].
- When listening to a tape:
  Turn ON the TAPE MONITOR switch (TAPE 1 or TAPE 2).

NOTE:
When TAPE 1 and TAPE 2 are both ON, the equipment connected to the TAPE 2 terminals will be played back.

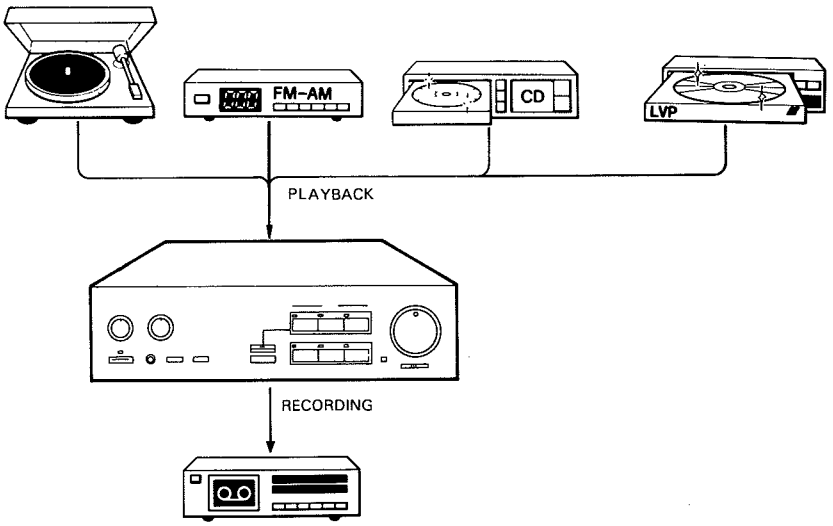
2. Operate equipment to begin playback.

3. Adjust playback volume with the VOLUME control on this unit.

RECORDING TAPES:

- While listening to playback on equipment connected to the rear panel terminals, you can record these same sounds on tape merely by setting your tape deck to the recording mode.
- Refer to the operating instructions for your tape deck for proper operating procedures.

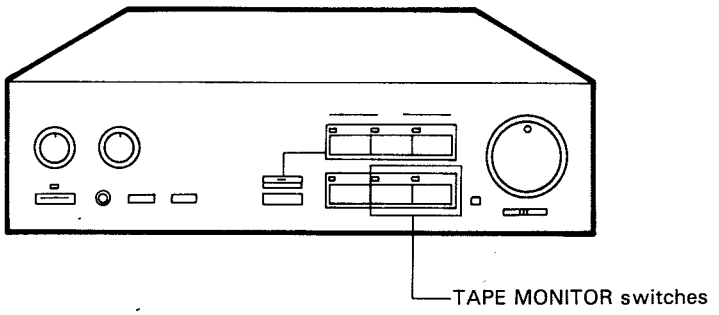
NOTE:
When the CD DIRECT FUNCTION switch is ON, the sound from the equipment selected by the INPUT selector switches will be recorded.



MONITORING WHILE RECORDING

On a 3-head tape deck, sound can be concurrently heard while recording on tape. This operation of checking the sound quality and recording level is called "monitoring".
At the time of monitoring, set the TAPE MONITOR switch of this equipment in the following way, to match the tape deck on which recording is being done.

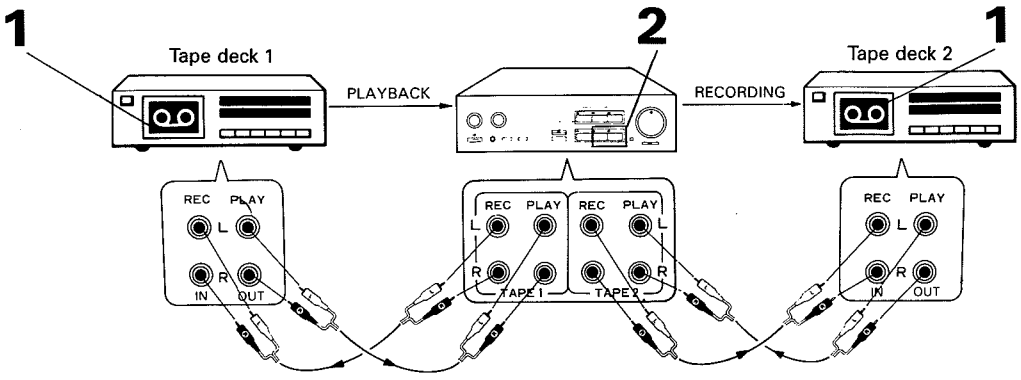
- When recording on the tape deck of TAPE 1 terminals:
  Turn ON TAPE 1. (Turn OFF TAPE 2)
- When recording on the tape deck of TAPE 2 terminals:
  Turn ON TAPE 2.



COPYING TAPES:

When two tape decks (or a double cassette deck) are used, you can record the sounds from one deck onto the other.
Application examples:

- To make a tape copy with contents identical to the original tape.
- To edit a recording of an FM broadcast in order to cut out unwanted commercials, recording only desired material onto another tape.



[When using two tape decks]

1. **Load tapes for playback (pre-recorded tape) and recording (tape for recording) into the respective tape decks.**
2. **Press the (TAPE 1) of the TAPE MONITOR switch.**
   - Turn ON the indicator of TAPE 1, and turn OFF the indicator of TAPE 2.

NOTE:
Tape deck of TAPE 1 terminals can be copied onto the tape deck of TAPE 2 terminals, but the opposite of this is impossible.

3. **Operate the tape decks to begin copying.**
   Set the tape deck with the original (playback) tape to the playback mode, and set the tape deck with the tape for recording to the recording mode.

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check out the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Probable Cause	Remedy
No power supplied to unit	• Power plug is disconnected from outlet. • The component's power plug has been plugged into another component's power outlet (e.g. timer, etc.), but power to that unit is disconnected.	• Insert plug securely in outlet. • Turn on power to other component.
No sound	• Connecting cords are disconnected from terminals, or connected incorrectly. • Terminals, or connecting cords' pin plugs are dirty. • The INPUT selector or TAPE MONITOR switches selected do not match the component being played back. • Operation of other components is incorrect. • The speakers selector switch is set to "OFF". • The CD DIRECT FUNCTION switch is set to "ON".	• Connect securely. • Clean terminals and plugs. • Set switches correctly (PHONO, TUNER, CD, VIDEO/AUX, TAPE 1, TAPE 2). • Consult the operating instructions for the other components. • Set the switch to "ON". • Set the switch to "OFF".
No sound from one speaker	• Connecting cords or speaker cords are disconnected on that side. • BALANCE control has been adjusted to one side.	• Connect securely. • Adjust BALANCE control to center position.
Can't record tapes	• Connections are incorrect. • Operation of tape deck is incorrect.	• Re-connect properly. • Consult the operating instructions for the tape deck.
Can't perform tape copying	• The position of the TAPE MONITOR switches are incorrect (when using 2 tape decks). • Operation of tape decks is incorrect.	• Set switch correctly (see section "COPYING TAPES"). • Consult the operating instructions for the tape decks.

SPECIFICATIONS

AMPLIFIER SECTION

Continuous Average Power Output is 40 Watts* per channel, min., at 8 ohms from 20 Hertz to 20,000 Hertz, with no more than 0.02% total harmonic distortion.

**Measured pursuant to the Federal Trade Commission's Trade Regulation rules on Power Output Claims for Amplifiers.*

Continuous power output (both channels driven)
- 20 Hz to 20 kHz, T.H.D. 0.02%, 8 Ω ..... 40 W + 40 W

DIN continuous power output (both channels driven)
- 1 kHz, T.H.D. 1%, 8 Ω ..... 55 W + 55 W
- 1 kHz, T.H.D. 1%, 4 Ω ..... 72 W + 72 W

IEC continuous power output (both channels driven)
- 63 Hz to 12.5 kHz, T.H.D. 0.7%, 8 Ω ..... 53 W + 53 W
- 63 Hz to 12.5 kHz, T.H.D. 0.7%, 4 Ω ..... 70 W + 70 W

Dynamic power output (on EIA dynamic test signal)
- 8 Ω ..... 55 W + 55 W
- 4 Ω ..... 90 W + 90 W
- 2 Ω ..... 100 W + 100 W

Total harmonic distortion (measured by Audio Spectrum Analyzer)
- 20 Hz to 20 kHz, 40 W, 8 Ω 0.02%

Input sensitivity/impedance
- PHONO (MM) ..... 2.5 mV/50 kΩ
- CD, TUNER, VIDEO/AUX, TAPE ..... 150 mV/33 kΩ

PHONO overload level
- 1 kHz, T.H.D. 0.02% (MM) ..... 150 mV

Output level/impedance
- TAPE REC ..... 150 mV/2.2 kΩ

Frequency response
- PHONO (MM), 20 Hz to 20 kHz ..... ±0.3 dB
- CD, TUNER, VIDEO/AUX, TAPE, 5Hz to 80kHz ..... $^{+0}_{-3}$ dB

Tone control
- BASS ..... ±8 dB (100 Hz)
- TREBLE ..... ±8 dB (10 kHz)

Loudness contour (volume control set at −40dB position)
+ 7 dB (100 Hz)/+ 4 dB (10 kHz)

Signal-to-Noise ratio (IHF short circuit, A network)
- PHONO (MM, 5 mV input) ..... 88 dB
- CD (DIRECT) ..... 105 dB
- CD, TUNER, VIDEO/AUX, TAPE ..... 100 dB

Signal-to-Noise ratio (DIN, continuous power/50 mW)
- PHONO (MM) ..... 73 dB/60 dB
- CD (DIRECT) ..... 86 dB/63 dB
- CD, TUNER, VIDEO/AUX, TAPE ..... 86 dB/60 dB

Power Supply/Miscellaneous

Power requirements
- U.S., Canadian models ..... AC 120V, 60 Hz
- European model ..... a.c. 220 V~, 50/60 Hz
- U.K., Australian models ..... a.c. 240 V~, 50/60 Hz
- Other destination models ..... ~AC 110 V/120−127 V 220 V/240 V (switchable), 50/60 Hz

Power consumption
- European, U.K., Australian models ..... 410 W
- Canadian model ..... 330VA (CSA)

Dimensions ..... 420 (W) × 316.5 (D) × 120 (H) mm
16-1/2 (W) × 12-1/2 (D) × 4-3/4 (H) in

Weight ..... 7.0 kg (15 lb 7 oz)

Accessories

Operating instructions 1

- *Specifications and design subject to possible modification without notice due to improvements.*

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